

Light Wood-Frame Shaft Wall Detailing for Code Compliance and Constructability

Presented by Anisa Awad and Thuy Fontelera

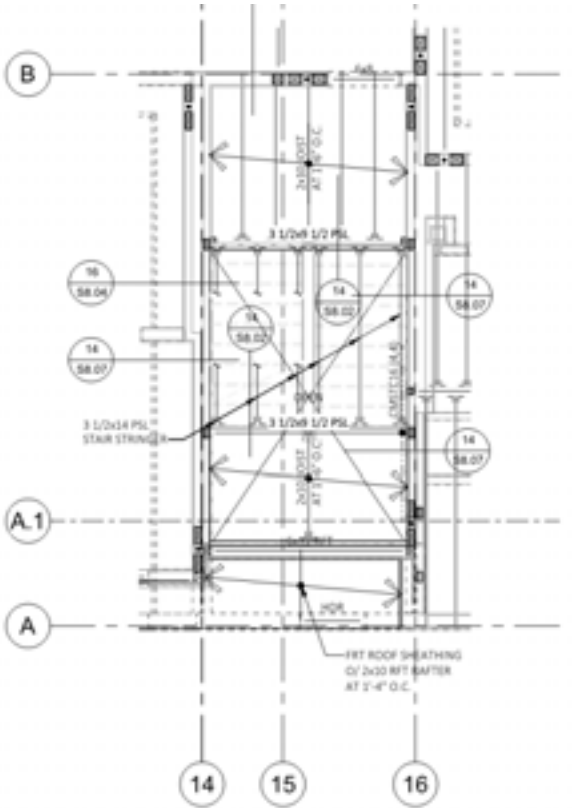


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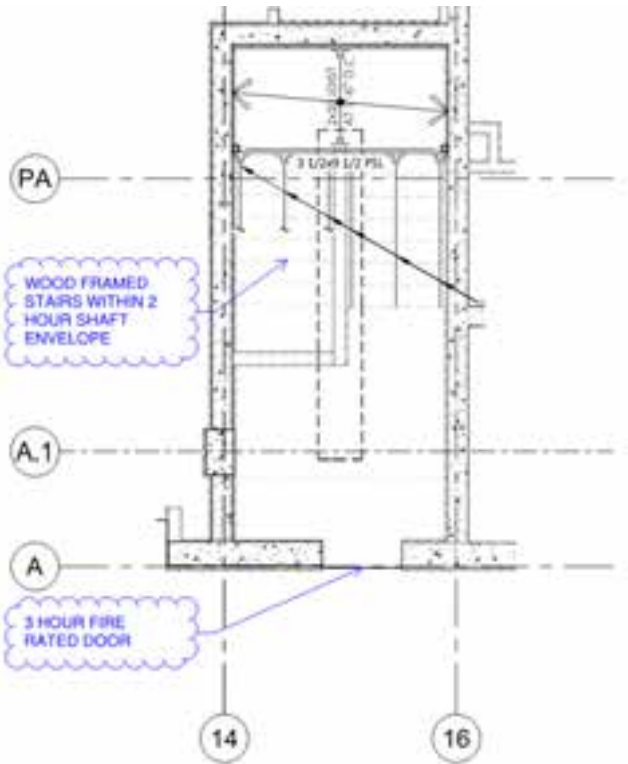
Case Study: Meridian Apartments

- Location: Santa Clara
- 5 story wood-framed (Type IIIA) over a concrete podium (Type 1A).
- The stair shaft case study presented is an all wood-framed starting at the ground level.
- This case study has been approved by the city under the CBC 2019 and the project is currently under construction.
- The case study is a 2-HR Fire Barrier Stair Shaft
- Seismic Design Category D

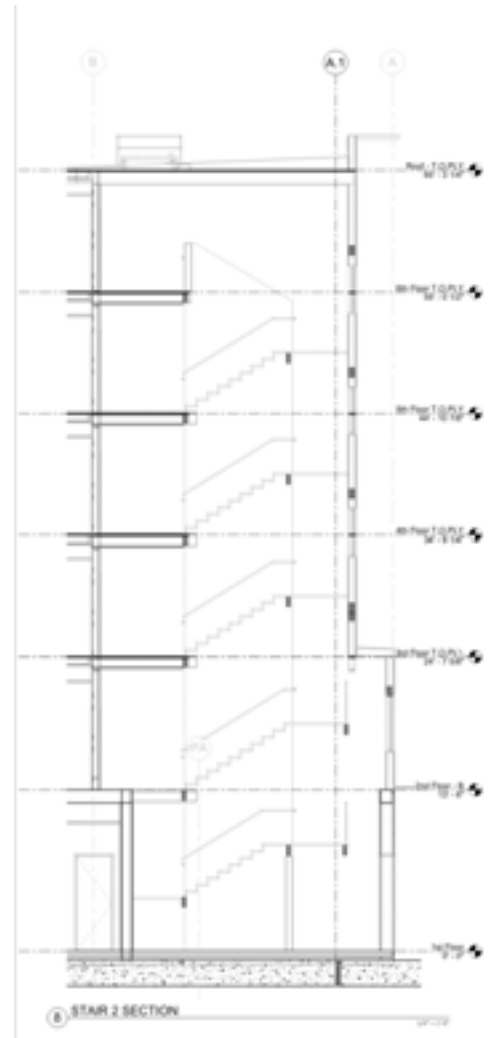
Stair Shaft Plan and Section:



3 STAIR FRAMING PLAN - 3RD FLOOR
STAIR 2
1/4" = 1'-0"

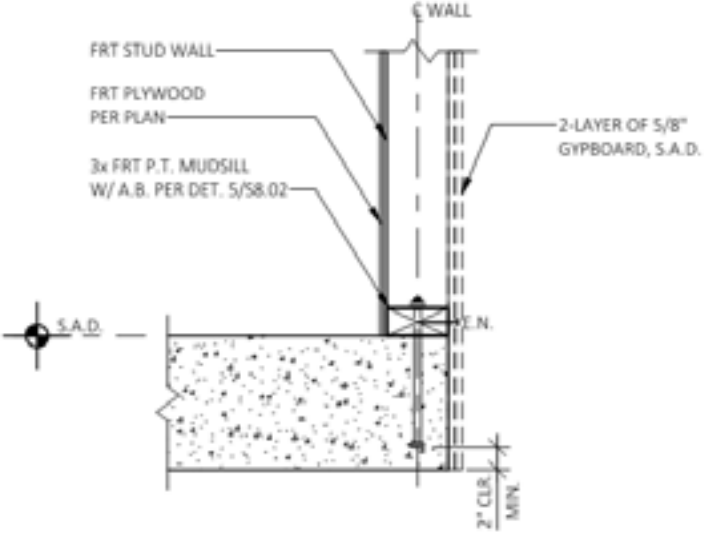


1 STAIR FRAMING AND FOUNDATION PLAN
STAIR 2
1/4" = 1'-0"

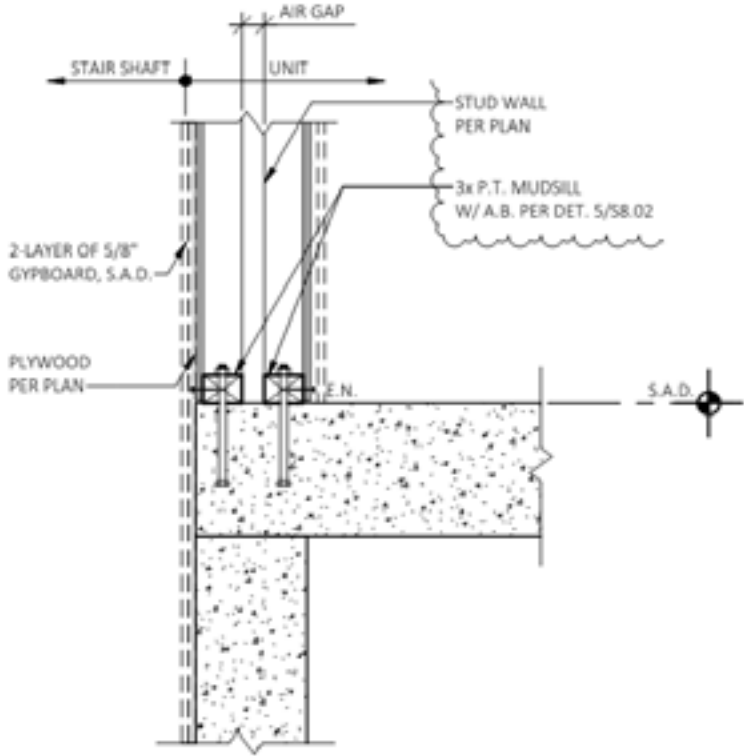


2 STAIR 2 SECTION
1/4" = 1'-0"

Stair Shaft at Podium:



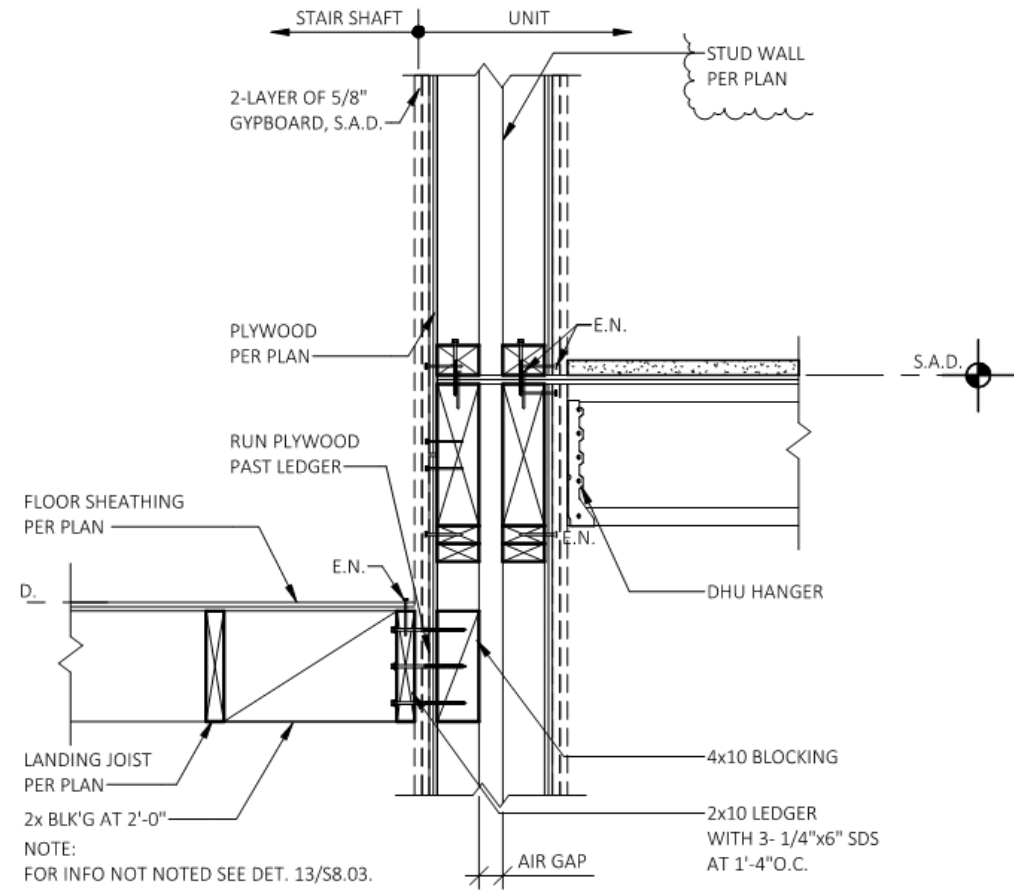
EXTERIOR STAIR SHAFT AT PODIUM SLAB



2-HOUR FIRE RATED WALL AT STAIR SHAFT

Stair Shaft at unit to stair (floor):

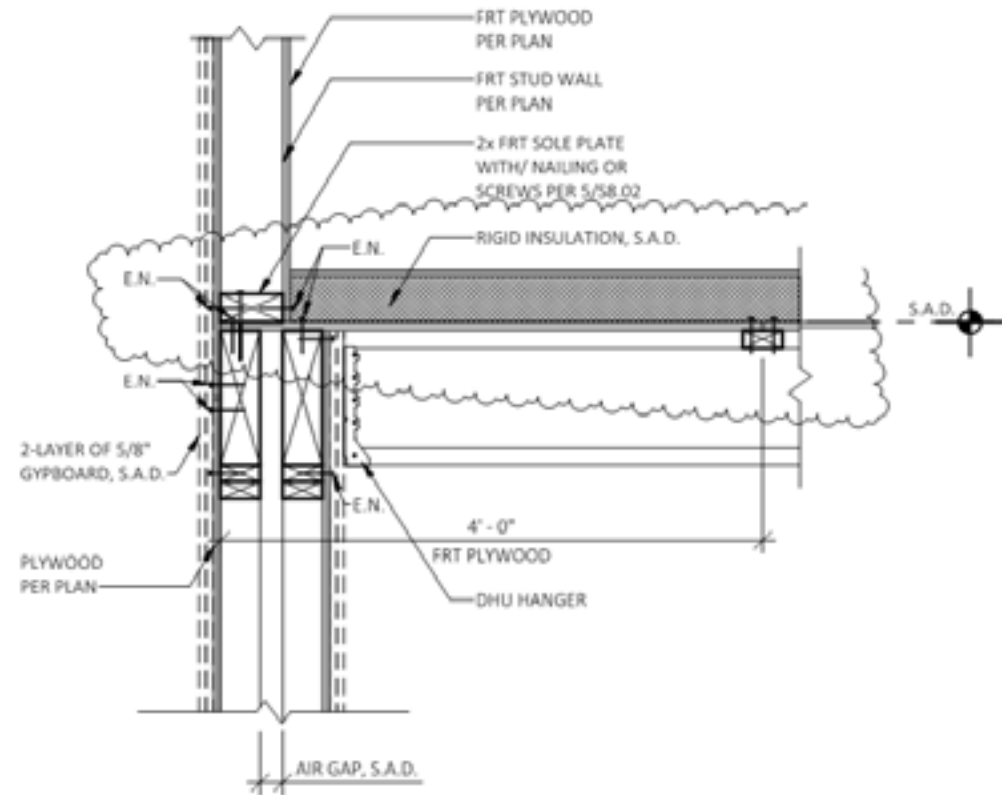
- Gypsum board is continuous on shaft side
- Solid blocking is required
- Select appropriate hanger that are rated for gypsum board support
- Screws should be check for shear rated values with standoff



2-HOUR FIRE RATED WALL AT STAIR SHAFT

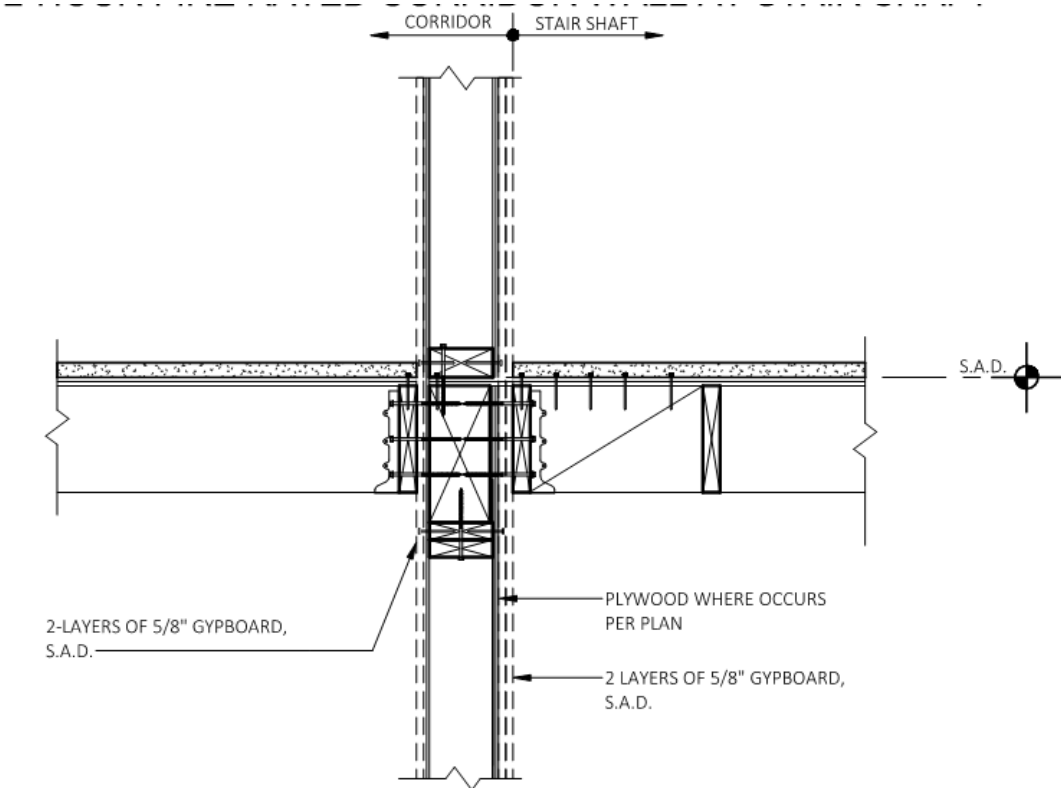
Stair Shaft at unit to stair –roof:

- Stair walls transition from double party walls to single exterior wall
- Ensure FRT members, such as wall plywood, stud walls, sole plates are specified at the exterior wall



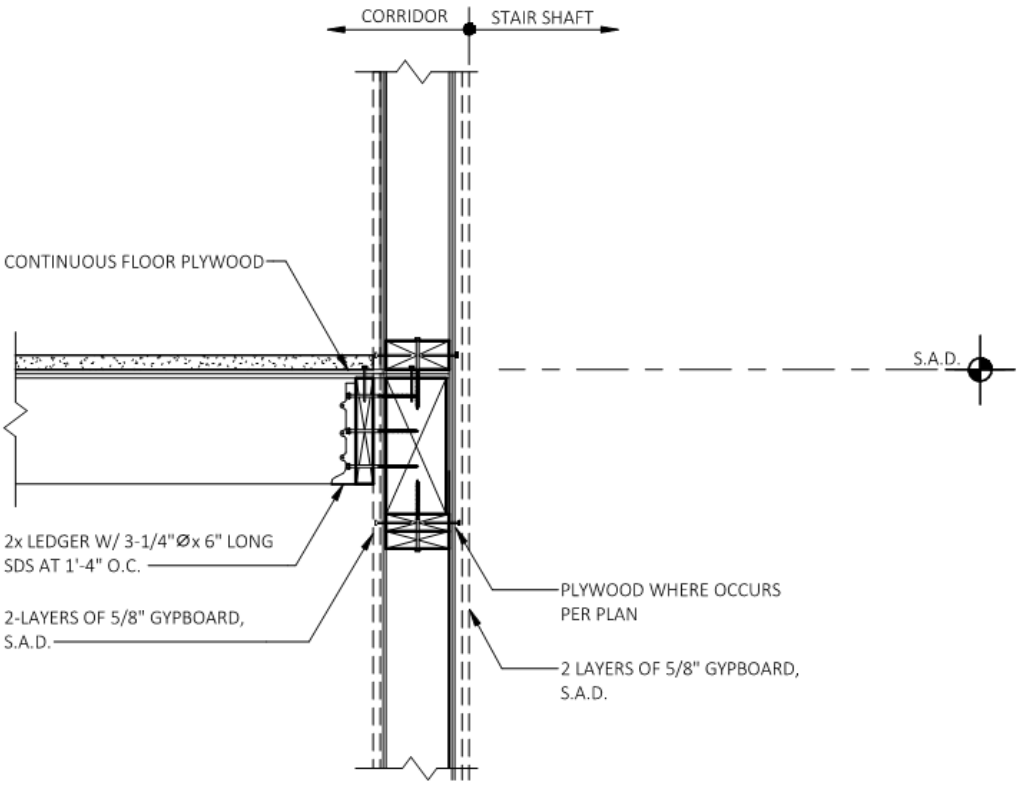
2-HOUR STAIR TOWER AT ROOF

Stair Shaft at corridor to stair:



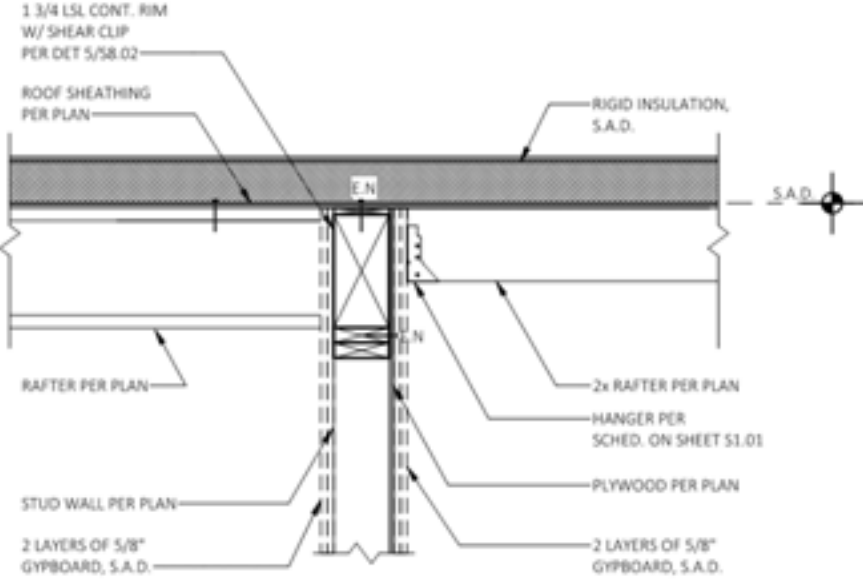
NOTE:
FOR INFO NOT NOTED, SEE DET. 5/S8.03 AND 7/S8.03.

2-HR FOR RATED CORRIDOR WALL AT STAIR SHAFT

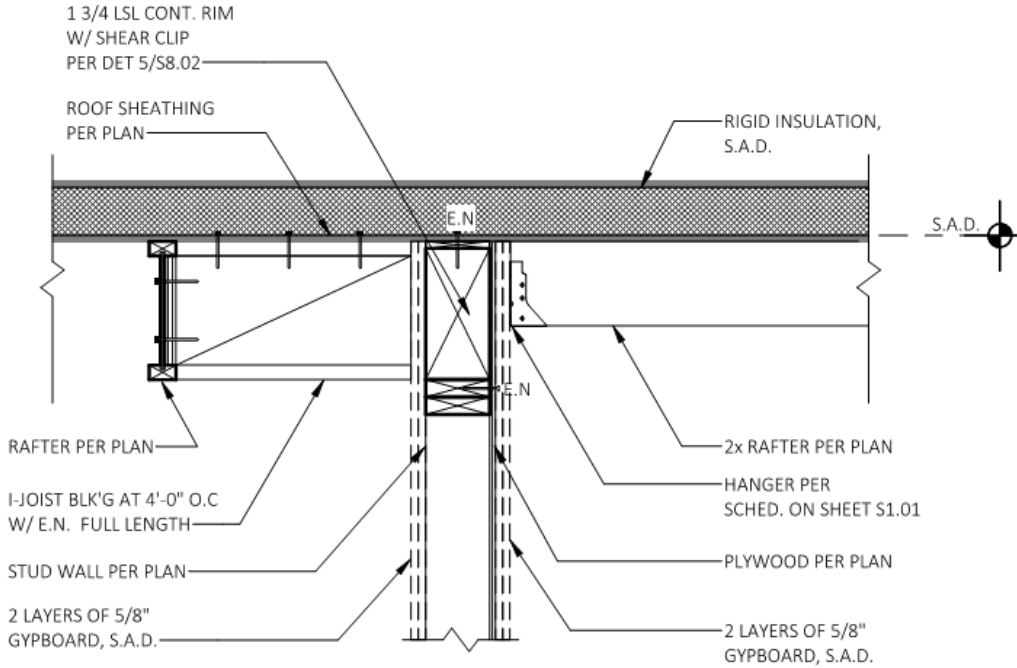


2-HR FOR RATED CORRIDOR WALL AT STAIR SHAFT

Stair Shaft at corridor to stair:

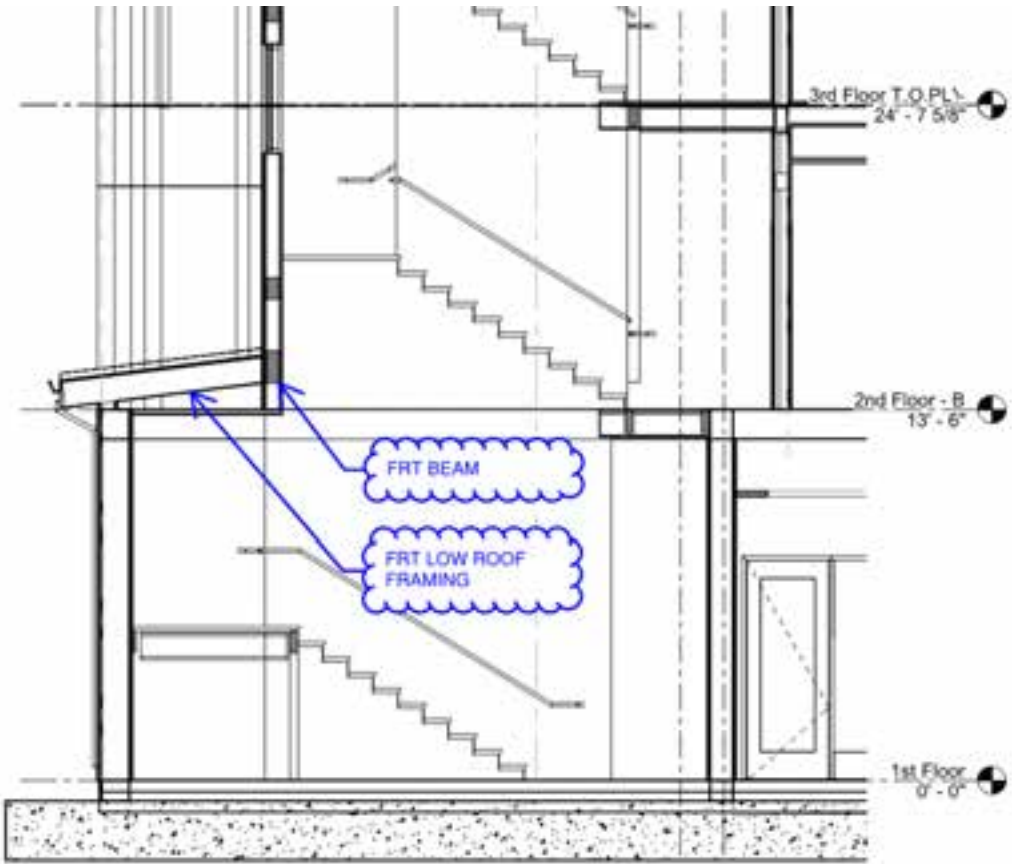


**INTERIOR SHEARWALL PERPENDICULAR TO UNIT
 RAFTERS 2-HOUR FIRE RATED CORRIDOR WALL AT
 STAIR SHAFT** 1" = 1'-0"



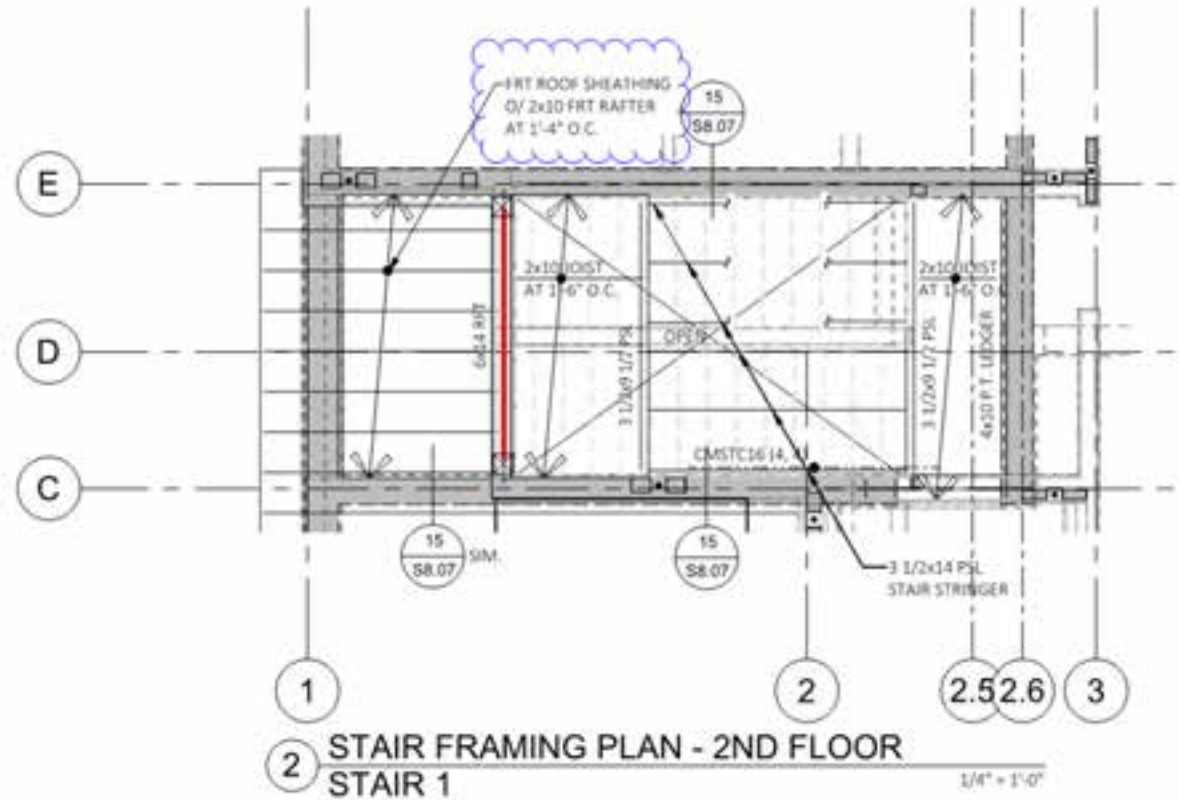
**INTERIOR SHEARWALL PARALLEL TO UNIT RAFTERS
 2-HOUR FIRE RATED CORRIDOR WALL AT STAIR SHAFT** 1" = 1'-0"

Stair Shaft landing at exterior wall:



9 STAIR 1 SECTION

1/4" = 1'-0"



2 STAIR FRAMING PLAN - 2ND FLOOR STAIR 1

1/4" = 1'-0"

Thank You!



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